

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. -9. (Canceled)

10. (New) A heat exchanger comprising:

- an enclosure provided with a plurality of tubes in which a heat-transfer fluid circulates, said fluid conveying cleaning balls;

- feed and outlet collectors joined to the enclosure via a first and a second side wall of the enclosure opposite each other, respectively, in order to bring the heat-transfer fluid into the enclosure and to discharge said heat-transfer fluid coming from the enclosure respectively, the outlet collector being produced as one part in the form of a single piece having a first portion forming a flow converger and a second portion forming a nozzle that is joined to said flow converger, this outlet collector having a downstream mouth via which it is joined to a heat-transfer fluid discharge pipe; and

- a separation device placed in the second portion of the outlet collector in order to separate the cleaning balls from the fluid conveying them, which device comprises at least two pairs of grids placed near the downstream mouth and each mounted so as to rotate on a spindle that extends across said second portion, the spindles for the grids being pairwise parallel to one another, this separation device forming a filtering structure that converges on a recovery device placed in said second portion so as to recover the cleaning balls leaving the separation device.

11. (New) The exchanger as claimed in claim 10, in which said first portion has a rectangular cross section and said second portion has an approximately constant circular cross section.

12. (New) The exchanger as claimed in claim 10, in which the separation device comprises two pairs of grids having a W-shaped profile converging on the recovery device.

13. (New) The exchanger as claimed in claim 11, in which the separation device comprises two pairs of grids having a W-shaped profile converging on the recovery device.
14. (New) The exchanger as claimed in claim 10, in which each grid comprises a row of spaced-apart parallel blades.
15. (New) The exchanger as claimed in claim 14, in which a plurality of coaxial spacers together form the spindle for supporting each grid.
16. (New) The exchanger as claimed in claim 14, in which each of said pairs of grids consists of a central grid, the blades of which are relatively long, and of a peripheral grid located near the wall of the collector and the blades of which are relatively shorter.
17. (New) The exchanger as claimed in claim 15, in which each of said pairs of grids consists of a central grid, the blades of which are relatively long, and of a peripheral grid located near the wall of the collector and the blades of which are relatively shorter.
18. (New) The exchanger as claimed in claim 10, which includes a device for measuring a fluid pressure difference on either side of the grids, said device being connected to a system designed to cause the grids to rotate when this pressure difference is greater than a predetermined value.
19. (New) The exchanger as claimed in claim 11, which includes a device for measuring a fluid pressure difference on either side of the grids, said device being connected to a system designed to cause the grids to rotate when this pressure difference is greater than a predetermined value.